Abstract. The realities of the last two decades have demonstrated how fragile the financial system is and how difficult it is to achieve stability. This is a headache for the authorities, as it affects the main litmus of economic growth, and the real economy in particular. As we all know, financial crises affect directly proportionally on the stability of macroeconomic indicators and the result is an inertial deterioration of the steadfastness of the financial block in a spiral. In this connection, central banks of all sovereign central banks ignore the development bar of development, develop their financial stability strategies. The purpose of this document is to achieve the set goals and governments spare no financial resources to track potential threats to the stability of their financial systems. The importance of studying this issue is due to the high turbulence of the processes that occur on and off the territory the country. As one of the requirements of economic security is to ensuring steadfastness of stability. A close object is to this in the strategic documents of Kazakhstan, in particular in the Strategic Development Plan of our country until 2025. Comparing the factors and litmus of the steadfastness of the financial block at the state level, we have outlined in this paper an approach to the analysis of the monetary block. Defining the conceptual apparatus of financial stability, its main elements are described in detail. The endogenous and exogenous factors of such stability are clarified, an attempt is made to concretize a set of indicators.

Keywords: financial stability, financial instability, financial system, factors of financial stability, indicators of financial stability.

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Introduction

When asked what is a litmus of the competitiveness of a state in the global economy, one can confidently answer that it is financial stability. Ensuring this stability is one of the strategic priorities of the state, which directly affects socio-economic development. In our era of turbulence, financial instability leads to financial turmoil [1]. All actions aimed at reducing various threats and risks are carried out to strengthen financial stability.

The priority responsibility of the authorities of various States is providing of financial steadfastness. This is due to the fact that such stability stimulates economic growth and improves the livelihoods of every citizen through effective work (allocation of resources and risk allocation). The analysis of financial steadfastness has appeared recently in the scientific community. As in many areas of economic research, this area in the literature is considered at three levels, i.e. micro-level, national and international. Moreover, the last two levels are closely interrelated [2]. Accordingly, the microlevel is when each individual financial institution contributes to stability at the national level. Whereas the steadfastness of the national level of each subject of the world economy, respectively, maintains the balance of the financial block at the exogenous level. It is proposed to consider an analysis of the steadfastness of the financial block at the national level, since the financial steadfastness of each individual organization has been well studied and the corresponding indicators have been determined, which cannot be said about the level above. The same situation is with the study of
Financial stability in conditions of economic turbulence

this issue at the international level. But we must clearly understand that without determining the national steadfastness of the financial system, it is impossible to determine the steadfastness of the international level. A number of publications of domestic and foreign authors are devoted to issues of financial steadfastness at the national and international levels: N.K. Kuchukova, Z.D. Iskakova, L.M. Sembiyeva, S. Moiseeva [3]; D.A. Plekhanov [4]; J. Chant [5]; A. Crockett [6]; R. Ferguson [7]; M. Foot [8]; B. Gadanecz and K. Jayaram [9]; F. Mishkin [10] Harry G. Schinasi [11].

Methodology

In this study, stability parameters were compiled from composite indicators on various grounds. We have developed a comprehensive index component related to relevant market conditions, including BSRI (Banking System Reliability Index), VFI (Financial Vulnerability Index) and RCI (Regional Climate Economical Index). The next step is to analyze macro indicators of a prudential nature. They will show an assessment of financial steadfastness indices in certain lag periods of time. At the same time, our country’s financial stability index for a ten-year period of time will be considered.

Literature review

Of course, today the researchers’ gaze on the theoretical component of the analysis of the steadfastness of the financial block is high. However, there are no consensus solutions. This can be judged by the lack of conceptual apparatus in terms of determining financial stability, indicators of its assessment.

Scientific and practical literature puts forward two visions of the nature of financial sector stability: 1) one part accepts the need to go from the opposite and define as the absence of instability of the financial block; 2) the other part does not agree with this approach and considers it appropriate to consider from the stability side.

Let’s look at the specific views of specific people. The CEO of Bank for International Settlements, Andrew Crockett, gives a definition that consists in the absence of instability. This is when there are no circumstances when financial sector organizations cannot meet their obligations, when financial assets depreciate [6].

So, based on the above definition, we see two accents: 1. the presence of potential threats to economic development, including for the real sector; 2. unpredictability of financial markets, inability to meet the obligations of financial institutions, i.e. collapse.

First Head of the Canadian Payments Association J. Chant agrees with the position of the previous author. He explains that in such a situation, unstable financial markets have the effect of pests for the effective functioning of the economy as a whole [5]. Both the first author and the second believe that even if there are no real changes in the direction of deterioration of the litmuses of the real sector, but there is only risk, even then we can talk about the variability of the financial sector that has arisen. Unlike Croquet J. Chant highlights only financial markets.

Economist Roger Ferguson is also for the reverse approach. According to his reasoning, the variability of the financial sector for the authorities and central banks of countries includes the concept of “market failure”. Which, accordingly, has a negative effect on the economic development and growth of the country. The author points to three criteria of instability, namely:

1. volatility of the value of major financial assets;
2. on the territory of the country or beyond it, problems in obtaining borrowed funds and interruptions in the operation of securities markets;
3) the change in the total expenditures of the country from its capabilities [7].

Based on the above, the variability of the financial sector is characterized by the presence of threats to the deterioration of economic development indicators, a sector with high added value or events that have already occurred in which financial institutions cannot meet their obligations. Now we consider it possible to proceed to the consideration of the opposite view of this concept.

Harry J. Schinasi has done considerable work on this issue. His work is called The Definition of Financial Stability. He defined five basic principles for defining this concept.
1. Spread to all components of the financial system, i.e. infrastructure, institutions and markets.

2. In parallel with the effective management of resources and risks, the consolidation of savings and savings, as well as the stable operation of the payment system is important.

3. When there are no negative impacts of an economic nature, leveling the balance of circumstances that can worsen the state of the final block.

4. When there are no negative consequences for the sectors of the economy with high added value, they cannot be regarded as alarming signals for the stability of the financial system.

5. It cannot be some kind of constant state or positive dynamics. This is a clear state, a certain range [11].

Thus, based on the above principles, the author gives the definition of the following content. The financial organism is stable in the situation when it stimulates the growth of economic development, balances financial threats that appear regardless of the source, due to various circumstances [11]. Currently, analyzing the definitions of various major banks of countries around the world, it can be concluded that they are based on the above principles of the author.

It is clearly clear and it is natural that both views on this definition are obvious that the first and second approaches to the definition have both differences and common characteristics. They both consider the impact on the sectors of the economy with high added value, as it affects the development of the entire economy of the country as a whole (the real sector). Thus, representatives from the opposite interpret that instability is the risk of deterioration of the real indicators of the economy that arise in financial markets and financial structures mainly due to the characteristics of not being able to fulfill their obligations. While others believe that stability helps this system to work efficiently and smoothly.

Based on these two approaches, we will further consider the steadfastness of the financial system from the internal and external factors. Table 1 describes the stability factors of the financial organism for its assessment of quantitative characteristics.

Let’s approach each factor separately and take a closer look. Of course, there is unconditionally a fundamental factor that, like a whale, keeps the steadfastness of the entire financial system unshakable — this is the steadfastness of the banking sector. This sector of the main financial institutions consists of banks representing various funds and companies, such as insurance, pension provision, investment activities and many others.

Financial stability has become a very important goal over the past decade. It is necessary to point out the importance of stability of financial system and the negative impact of its absence in accordance with various points of view [12].
In 2 decades, the term “stability” has been widely used to refer to financial systems [13]. There is no single definition of financial system vulnerability, and even less uniformity in how it should be measured. Many researchers use the term steadfastness of the financial system, such as F.S. Mishkin [14], A. Crockett [15], I. Mc-Farlane [16], P. Sinclair [17] and Duisenberg, while others use the term monetary variability (De Graeve et al [18]; Klomp and De Haan [19]).

**Discussion**

In recent years, the global economy has faced a radical change in the risk map for financial stability. The period of total uncertainty caused by the collision of the world economy with an absolutely unprecedented event of our time - the COVID-19 pandemic, has been replaced by a period of recovery in economic activity. Nevertheless, the year was marked by continued supply chain disruptions, record energy prices and a significant increase in inflationary pressures. In addition, uncertainty remained regarding epidemiological risks and prospects for global economic growth due to the emergence of new COVID-19 strains.

The global financial system maintained its ability to function sustainably, the actions of regulators made it possible to stop liquidity problems in the markets, and the sufficiency of bank capital buffers

### Table 1

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*Note: based on the source [2]
helped to cope with the inevitable need to absorb losses not previously pledged. At all levels, both local and global, getting on the trajectory of recovery with simultaneous containment of price pressure and countering the growth of inflation expectations were the main issues on the global economic agenda. Regulators are faced with a compromise of maintaining short-term support for the economy while preventing lasting risks to financial steadfastness. At the same time, the risks associated with the sustainability of further economic development and the restoration of the solvency of both the population and business began to come to the fore.

In advanced economies and emerging markets, the ratio of both sovereign and corporate debt to GDP has generally increased, showing long-term vulnerabilities in certain blocks of the economy. It was easier for economies with a sufficiently developed infrastructure for redistributing market risks to absorb economic shocks, which gave them greater potential for subsequent recovery compared to economies in which the monetary market is less developed. Despite the fact that the development of the country’s financial market is also affected by the degree of diversification of its economy, the multisectoral nature of the current crisis has highlighted the low resilience of even sufficiently diversified economies.

The current period has demonstrated the vulnerability of many well-established models of long-term growth and stability, raised a number of issues on the priority of developing mechanisms to ensure sustainability and real prospects for point niches of the economy. He also showed the need for a clear interaction of monetary and fiscal channels, the first as a tactical mechanism for rapid response and management, the second as a system of strategic goal-setting in the process of implementing a balanced long-term economic policy.

According to IMF estimates, global economic growth in 2021 (WEO, 2021Q1) was projected at 5.5%, with a revision in the 2 quarter to six percent [20]. In this year, the downgrade of the forecast for developing Asian countries with a simultaneous increase in the forecast for the US and the EU, where additional fiscal support measures were expected, kept the forecasts at 6% (WEO, 2021Q3). However, due to the deterioration of the epidemiological situation due to the spread of the omicron strain SARS-CoV-2, at the end of the year in both categories of countries, less positive rates of economic recovery were observed, which led to an actual growth of the global economy of 5.9% (Figure 1) (WEO, 2021Q4).

Disruption of global supply chains and limited labor migration, rising energy prices, unsatisfied consumer demand and aggressive fiscal stimulus have combined to lead to record levels of inflation in a number of countries (Figure 2). There is an increase in the index of food prices by country.
The key factor that has led to an increase in inflation in many regions is high energy prices, including crude oil - the main export commodity of Kazakhstan. According to the results of the year, there is a positive oil market situation for Kazakhstan. According to IEA estimates, global oil demand increased by 5.5 million barrels per day in 2021, returning to the pre-crisis level of 99.7 million barrels per day (IEA | World Energy Outlook 2021). However, this recovery in demand was not accompanied by capital investments, and global spending on exploration and production remained at the level of 2019. Brent crude oil at the beginning of the year was trading in the range of 50-60 US dollars per barrel, but against the background of the recovery of markets and business activity, it increased in price by 65%, reaching a peak of 86 US dollars by November 2021. This made a positive contribution to the dynamics of the balance of payments of our country - exports of goods according to the PB methodology increased by 27.2% to $60.2 billion, mainly due to a nominal increase in exports of petroleum products.

The impact of energy transition risks on financial stability Uncertainty around global climate change makes it difficult to accurately assess its impact on economic activity. Climate shocks not only lead to serious economic losses, but also affect the systemic indicators of financial stability.

The climate crisis may lead to a decrease in the profitability of companies and the depreciation of certain categories of their assets, which will potentially lead to a deterioration in the ability of firms to service their debts and a higher level of defaults, negatively affecting financial stability. The risks affecting financial stability from climate change are usually divided into physical and transitional:

* Physical risks, including economic costs associated with the increasing strength and frequency of extreme weather events, lead to a deterioration in labor productivity and public health, and a decrease in the value of financial assets.

* Transitional risks associated with changes in policies aimed at mitigating the effects of climate change and adapting to a low-carbon economy affect market volatility, the value of financial assets and liabilities.

The analysis of transitional risks is becoming one of the priority tasks of regulators around the world, and the general bank of the Republic of Kazakhstan will also begin work on studying the impact of these risks on the economy of the Republic of Kazakhstan and developing strategies for taking into account climate risks.
In general, there are some vulnerabilities for households, but the risks to financial stability are moderate in the short term, but they are expected to increase in the long term. Due to a significant amount of savings and an increase in real incomes, households as a whole retain the ability to withstand financial and economic shocks. However, an increase in debt servicing costs and a significant increase in inflationary pressure, leading to an increase in household spending on food and essential goods, may negatively affect both the pace of economic growth support and the ability to service debt. In addition, there is still a significant dependence of households on government support measures, which puts them in a vulnerable position when they are reduced.

**Results**

The index for the steadfastness of the financial block is created by utilizing a set of indicators that pertain to the development of the monetary block across multiple nations. It serves as the sole measurement that reflects the dimensional steadfastness of the monetary system and can identify sources of potential instability. This index is formed by amalgamating specific variables that are relevant to the vulnerability and smooth financial block. Apart from being a tool for the routine evaluation and monitoring of the financial sector’s level of fragility, the stability index can also be used to compare historical instances of financial block vulnerabilities that may not have had a direct force on stability. Illing M. & Liu Y. [21] created the Financial Stress Index (FSI) model for the Canadian financial system, where they explain how to build a composite litmus of financial steadfastness by independently selecting appropriate variables. This option is generally based on literary indicators of early warning, such as Kaminsky et al. [22], Bordeaux and Schwartz and usually incorporates the monetary system, special markets of exchange, and stock markets.

Van den End [23] developed a composite index of conditional financial steadfastness index (FSCI) for the Dutch banking system. The FSCI combines the Monetary Circumstance Index (MCI) and the Financial Circumstance Index (FCI) and includes solvency of monetary organizations, effective exchange rate, interest rates, immovable property.

Gersl A. & Hermanek [24] proposed a cumulative financial stability index litmus for the general bank of the Czech based on monetary health litmuses that relate to the IMF. Both show that the litmuses of the Aggregate Financial Stability Index (AFSI) can be used to compare other countries to rank this Republic along with other European Union countries based on their level of financial health.
Development of the monetary system steadfastness index composition of the aggregate parameter is carried out with equal weight for each of the litmuses in the subsections. Each of these subparameters defining the aggregate steadfastness index of the monetary system, as shown in Table 2 above [25].

**Conclusion**

Every indicator is important, no matter what. Subindexes are used in the calculation. They are given in one format and grouped arithmetic index. Financial System Stability Index (FSI):

\[
\overline{I}_{Bt} = \frac{1}{5} \sum_{j=1}^{5} I_{Bj,t} \\
\overline{I}_{Vt} = \frac{1}{8} \sum_{j=1}^{8} I_{Vj,t} \\
\overline{I}_{Rt} = \frac{1}{2} \sum_{j=1}^{2} I_{Rj,t}
\]

\[
FSSI_t = w_1 \ast (\overline{I}_{Bt}) + w_2 \ast (\overline{I}_{Vt} + \overline{I}_{Rt})
\]

The article presents a study on the steadfastness of the financial block and its linkage with the monetary and real sectors. The study used 15 indicators to develop a financial stability index, which is comprised of three sub-indices: banking system reliability (5 litmuses), monetary vulnerability (8 litmuses), and regional economic climate index (2 litmuses).
The study found that the US economic growth (GDPUS) and economic growth of ASEAN countries (GDPASE) had a positive impact on financial stability. However, the financial system of Kazakhstan is assumed to be integrated into the global financial system, making it susceptible to external shocks such as changes in exchange rates, price growth, interest rates, and liability levels.

The study also analyzed the effects of internal factors on financial stabilization and found that increases in external liability, high price growth and interest rates, and currency depreciation negatively impact financial steadfastness. The results of the study underscore the importance of maintaining steadfastness in the financial block, which requires a monitoring agreement and decisions for stabilizing the system during times of crisis. This involves the use of various instruments of financial stability not only by the central bank but also by other authorities. Coordination between institutions is necessary for effective information management and policy implementation.

Ensuring financial stabilization is a crucial component of a country’s socio-economic development strategy. The instruments of financial and budgetary policy are used to implement the objectives of the financial and budgetary strategy, and the effectiveness of their implementation determines the success of the strategy. In Ukraine, the main goal of financial and budgetary policy was to ensure the solvency of the state to promote economic activity, while at present, the focus should be on actively stimulating economic growth through rational management of public financial resources for financial stabilization.

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Финансовая стабильность в условиях экономической турбулентности

Аннотация. Реалии последних двух десятилетий продемонстрировали, насколько хрупка финансовая система и как сложно достичь стабильности. Это является головной болью властей, так как она влияет на экономическое развитие страны и на реальную экономику в частности. Как нам всем известно, финансовые кризисы имеют прямое воздействие на стабильность макроэкономических показателей, и результатом является инерционное ухудшение устойчивости финансовой системы по спирали. В связи с этим, центральные банки всех стран мира вне зависимости от уровня развития разрабатывают свои финансовые стратегии стабильности. Цель данного документа - достижение поставленных целей, и правительства не жалеют финансовых средств для отслеживания потенциальных угроз стабильности своих финансовых систем.

Важность изучения данного вопроса связана с высокой турбулентностью процессов, которые происходят как внутри, так и за пределами страны. Одной из приоритетных задач экономической безопасности является обеспечение финансовой стабильности. Этому уделено особое внимание в стратегических документах Казахстана, в частности, в Стратегическом плане развития нашей страны до 2025 года.

Проведя сопоставление факторов и индикаторов стабильности финансового блока на уровне государства, мы изложили в данной работе подход к анализу финансового блока. Определяя понятийный аппарат финансовой стабильности, подробно изложили его основные элементы. Уточнены эндогенные и экзогенные факторы такой стабильности, сделана попытка конкретизировать свод индикаторов.

Ключевые слова: финансовая стабильность, финансовая нестабильность, финансовая система, факторы финансовой стабильности, индикаторы финансовой стабильности.

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